

Understanding Behavioral Patterns of Social Media Usage Among Malaysian Undergraduate Students

Memahami Corak Tingkah Laku Penggunaan Media Sosial Dalam Kalangan Pelajar Sarjana Muda di Malaysia

*Noratikah Nordin**

School of Communication, Universiti Sains Malaysia, Penang, Malaysia

**Corresponding author: noratikahnordin@usm.my*

Received 1 November 2024

Accepted 13 February 2025, Available online 15 June 2025

ABSTRACT

Social media have become an important part of everyday life, yet the understanding of their usage patterns and motivations among students is still incomplete in order to enhance learning activities using digital technology. This study aims to understand and identify the behavioral patterns of undergraduate students in the context of preferred platform, frequency, duration and purpose of social media use. The study is based on a descriptive survey and 92 undergraduate students from Universiti Sains Malaysia were selected using a stratified sampling technique. The stratified sample size consists of the students who are enrolled in the Digital Communication program. The findings of this study reveal that Instagram is the most preferred social media platform of undergraduate students where many of them spend two to six hours daily. The purpose of using social media is to connect with family and friends. By understanding these patterns, educators can improve student engagement in learning activities by using Instagram to create online videos, awareness-raising content, infographics, and interactive quizzes to develop digital skills and improve digital literacy. Although social media use is significant and impactful for academic purposes, potential distractions from high social media use and mental health issues should be considered. Therefore, it is important to prepare students for success in today's digital world by understanding behavioral patterns of social media use among undergraduate students.

Keywords: social media, social media usage, social media analytics, digital communication

ABSTRAK

Media sosial telah menjadi alat penting dalam kehidupan seharian, namun pemahaman tentang corak penggunaan dan motivasi dalam kalangan pelajar masih belum lengkap untuk meningkatkan aktiviti pembelajaran menggunakan teknologi digital. Kajian ini bertujuan untuk memahami dan mengenal pasti corak tingkah laku pelajar sarjana muda dalam konteks platform pilihan, kekerapan, tempoh dan tujuan penggunaan media sosial. Kajian adalah berdasarkan tinjauan deskriptif dan 92 pelajar sarjana muda Universiti Sains Malaysia telah dipilih menggunakan teknik persampelan berstrata. Dapatan kajian ini mendapati bahawa

Instagram adalah platform media sosial yang paling digemari pelajar sarjana muda di mana kebanyakan mereka menghabiskan dua hingga enam jam setiap hari. Tujuan menggunakan media sosial adalah untuk berhubung dengan keluarga dan rakan-rakan. Dengan memahami corak ini, pendidik boleh meningkatkan penglibatan pelajar dalam aktiviti pembelajaran dengan menggunakan Instagram untuk mencipta video dalam talian, kandungan meningkatkan kesedaran, maklumat grafik dan kuiz interaktif untuk membangunkan kemahiran digital dan meningkatkan literasi digital. Walaupun penggunaan media sosial adalah penting dan memberi kesan untuk tujuan akademik, potensi gangguan daripada penggunaan media sosial yang tinggi dan isu kesihatan mental harus dipertimbangkan. Oleh itu, adalah penting untuk menyediakan pelajar untuk berjaya dalam dunia digital hari ini dengan memahami corak tingkah laku penggunaan media sosial dalam kalangan pelajar sarjana muda.

Kata kunci: media sosial, penggunaan media sosial, analisis media sosial, komunikasi digital

INTRODUCTION

As social media is increasingly used to share content, collaborate and express emotions and interests, the field of social media analytics is becoming more prominent in both business and research today (Sponder & Khan, 2017; Sümer & Parilti, 2023). Social media analytics is the process of systematically examining social media data to extract meaningful patterns and trends. This data-driven approach empowers organizations to make informed decisions and optimize their strategies. One of the key areas of social media analytics is the use of social media (Dumford et al., 2023; Fox, 2022). It is evident that the number of social media users is increasing by 5.2 per cent annually, with the average social media user visiting or using 6.8 different social media platforms each month (Fazil et al., 2024). It is therefore important to understand the patterns of social media use in order to make informed decisions, improve communication and support educational activities.

According to Al-Rahmi et al. (2022), social media is defined as web and mobile-based internet applications that enable the creation, access and sharing of user-generated content that is widely accessible. A social media platform is an online digital service or website that allows users to create, share and interact with content and engage with other users. Examples of social media platforms include Facebook, X (Twitter), Instagram, TikTok, YouTube and others (Alshuaibi et al., 2018; Khan, 2015). Nowadays, social media is used in higher education institutions as a platform for students to connect with their lecturers, fellow students and other researchers around the world (Tayo et al., 2019).

Today, social media has become an integral part of our daily lives, influencing the way we communicate, consume information, and interact with the world. Social media has revolutionized the way lecturers teach, and students learn. It provides a dynamic platform that can enhance the educational experience for both students and lecturers (Chandrasena & Ilankoon, 2022). By leveraging the power of social media, lecturers and educators can create more engaging, effective and accessible learning experiences for students. For example, students can use TikTok to create a cyberbullying awareness campaign with the hashtag (#preventcyberbullying). In addition, educators can use this hashtag to track the class projects. Although students can use TikTok as a platform to connect and share their projects, understanding the use of social media platforms needs to be explored to enhance educational learning activities.

Identifying the behavioral patterns of undergraduate students' social media usage in Malaysia is crucial to understanding the impact of technology on their academic and personal lives. Despite the widespread use of social media among young people, there is a lack of comprehensive research on the specific patterns of social media use among Malaysian undergraduate students to improve learning activities (Kamisan & Abu Bakar, 2021; Sheng et al., 2022). The study by (Kamisan & Abu Bakar, 2021) investigated the social media usage patterns among university students in Malaysia during the Movement Control Order (MCO). The findings, based on structured interviews with twelve students, show that social media is used as a medium of communication, source of information, platform for support and as a platform for learning and knowledge sharing, but there are limitations in identifying behavioral patterns of these students. Another study by (Sheng et al., 2022) investigated the use and influence of social media among pre-university students, and most students assumed that social media platforms had positive rather than negative impacts on them. This knowledge gap therefore hinders the ability to understand how social media platforms are integrated into their daily lives and how this usage can be utilized to enhance the learning experiences of undergraduate students in Malaysia.

Therefore, the main objective of this study is to identify the behavioral pattern of undergraduate students on the usage of social media. In this paper, the frequency, duration and purpose of the use of social media platforms among undergraduate students are highlighted. Moreover, the variation in usage pattern is important to improve learning activities and academic performance.

The rest of the paper is organized as follows. Section 2 presents some current uses of social media relevant to this paper, followed by the methodology of the study in Section 3. The results and discussion are described in Section 4. Finally, Section 5 contains the conclusions.

RELATED WORK

The use of social media by students at higher learning institutions has been analyzed in numerous studies. The study by Norsiah et al. (2013) has shown that there is a relationship between social media and personality traits. They investigated the social media adoption among students in Malaysia, where most students use social media extensively in their daily lives. In the study by Wan Roslina et al. (2017), the use of social media has affected the academic performance of students in Malaysia. They found that there is a negative relationship between social media use and poor academic performance, while there is a positive relationship between the number of active friends on social media and academic performance. However, there is also a negative impact on academic performance when it is not used wisely. Thus, there is insufficient analysis of student's behavioral patterns of social media use for learning context.

In addition, Mohd Sobhi et al. (2016) discussed the social media usage profile among youths in Malaysia. They found that females actively use social media more than five times a day compared to males. In fact, the purpose of social media use is to strengthen relationships and for business purposes. This study does not focus on enhancing learning activities and strategies. Moreover, Alshuaibi et al. (2018) investigated the role of student engagement as a potential mediator between social media use and academic performance of college students in Malaysia. The result showed that social media has the potential to be used in a learning environment as it promotes cognitive engagement of students in class and their academic performance, but has limited ability to identify the actual patterns of these students.

The influence of social media use and the level of social connectedness among university students has been investigated by (Rathakrishnan et al., 2023). They found that there was no significant relationship between social media usage and social connectedness. But the purpose of using social media and social connectedness have significant implications and relationships in the context of academic performance. The study by Al-Rahmi et al. (2022) examined educational quality, actual social media, and task-technology fit that affects student satisfaction and performance. The results showed that perceived usefulness and ease of use increase the behavioral intention to use social media through educational quality and actual social media usage for education; these factors finally affect students' satisfaction and academic performance.

The main problem with the existing studies is that there is a lack of identification of behavioral patterns in social media use, which is important for improving students' learning experiences. As social media has become an integral part of students' lives, there is a need to understand how their behavioral patterns of social media use will help educators, parents and policymakers understand the realities of the digital world. Understanding how students use social media can help develop effective and engaging educational practices (Chandrasena & Ilankoon, 2022; Sheng et al., 2022). Integrating social media platforms into collaborative projects, project reports, social media campaigns, and creating engaging assignments will equip students with the skills and knowledge of current technologies. Educators can guide students in developing healthy digital habits, such as setting screen time limits, and can support mental health apps.

In addition, parents can understand how their children use social media, guide them towards responsible online behavior and have open communication to address concerns and online experiences with their children. The government, especially the Ministry of Education, should also collaborate with educators, parents, and technology experts to develop and implement effective strategies that address the challenges and opportunities of the digital world. By understanding the use of social media, policymakers can develop informed technological policies, strategies and guidelines related to digital ethics, internet safety, and digital equity to create a safe online environment (Mohd Zawawi & Mohamad Judi, 2020). Therefore, identifying and understanding the behavioral patterns of social media usage is proposed. The main objective is to identify the social media usage behavior of undergraduate students in Malaysia. The frequency and duration of use, the purpose of use and the most popular social media platforms among students will be identified. The findings and results of this study will be able to understand the behavioral patterns of social media usage, which can improve the learning activities in the studies.

METHODOLOGY

A descriptive survey research design was adopted for this study. This method was considered suitable as it allowed the researchers to investigate the existing situation and obtain first-hand information from the respondents. The population of this study consisted of students at the School of Communication, Universiti Sains Malaysia, Malaysia. The sample was selected using the stratified sampling method. In this study, a stratified sample of students was formed based on academic programs, including Creative Screen, Journalism, Strategic Communication and Digital Communication. Only the students from Digital Communication program were selected because this program uses the social media platform as part of their learning activities and this program is a new program introduced in the school. The total population of the undergraduate students considered is 120 students and the sample size was calculated based on

the known population with a confidence level of 95 percent, and it was found that the minimum sample is 87 students (Taherdoost, 2016). The study sample consisted of 92 students who accepted to participate in the study and complete the online questionnaires. The questionnaire was developed based on a review of the existing literature on social media use, with questions adapted from validated instruments used in previous studies (Chandrasena & Ilankoon, 2022; Parlak Sert & Başkale, 2023). The questionnaire was created and prepared as a Google Form and included two sections: (1) information on socio-demographic data and (2) information on the duration and purpose of social media use. The study instrument was tested using Cronbach's Alpha to measure consistency, and convergent validity is used for construct validity; and the reliability coefficient was 0.86. Higher values of the coefficient indicate higher internal consistency and greater reliability of the scale. The data was collected in December 2023 and January 2024 by giving the Google link in the class session to the undergraduates' students of the Digital Communication program. The data was analyzed using descriptive statistics in the form of frequencies and percentages. Descriptive analysis is sufficient in this study as this paper focuses on summarizing and describing the use of social media platforms as a basis for understanding students' behavioral patterns (Tarifa-Rodriguez et al., 2024).

RESULT AND DISCUSSION

The main objective of this study is to identify the behavioral pattern of undergraduate students on usage of social media. A total of 92 students participated in this study. Distribution of gender of students is shown in Figure 1.

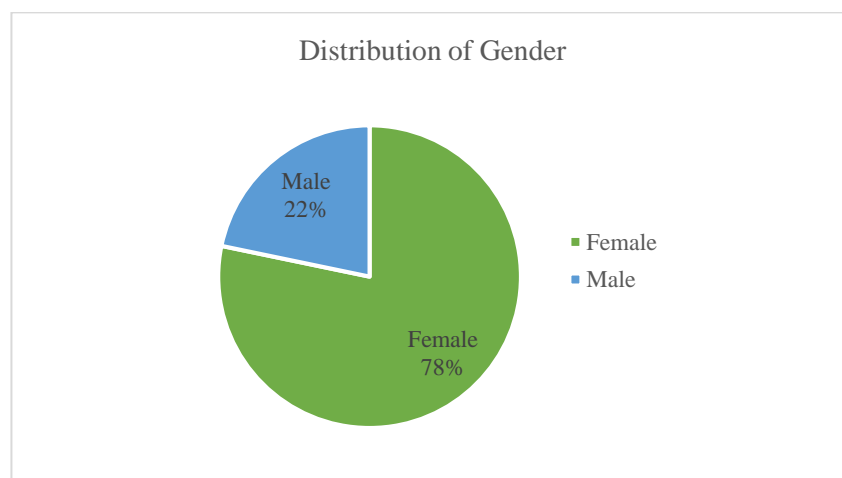


FIGURE 1. Distribution of Gender

The majority of students were female (n=72, 78%) as illustrated in Figure 1. The majority of students (n=58, 63.04%) fall within the age range of 19 to 21 years old. This age group is very relevant to social media usage behavior, as this group actively establishes and maintains social connections via the Internet, is familiar with technology and strongly influenced by social trends. The second age group is followed by 22 to 24 years old (n=32, 34.78%), 25 to 27 years old (n=1, 1.09%) and 28 years old and above (n=1, 1.09%) as shown in Figure 2.

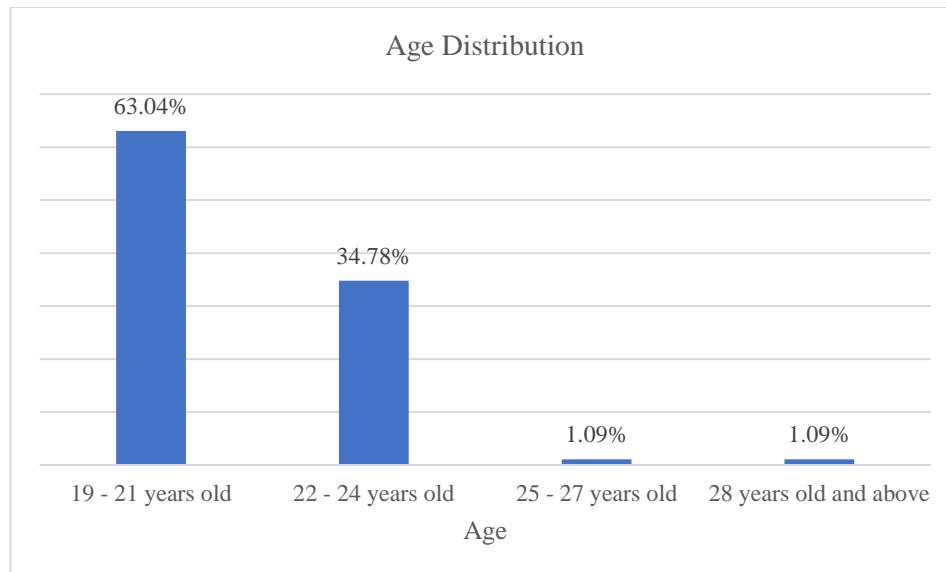


FIGURE 2. Age Distribution

Figure 3 shows the duration of daily time of social media usage among undergraduate students. Most of the students ($n=51$, 55.43%) spend their daily time on social media was 2 hours to 6 hours, followed by 6 hours to 12 hours ($n=25$, 27.17%), 31 minutes to 2 hours ($n=13$, 14.13%), 12 hours or more ($n=2$, 2.17%) and less than 30 minutes ($n=1$, 1.09%).

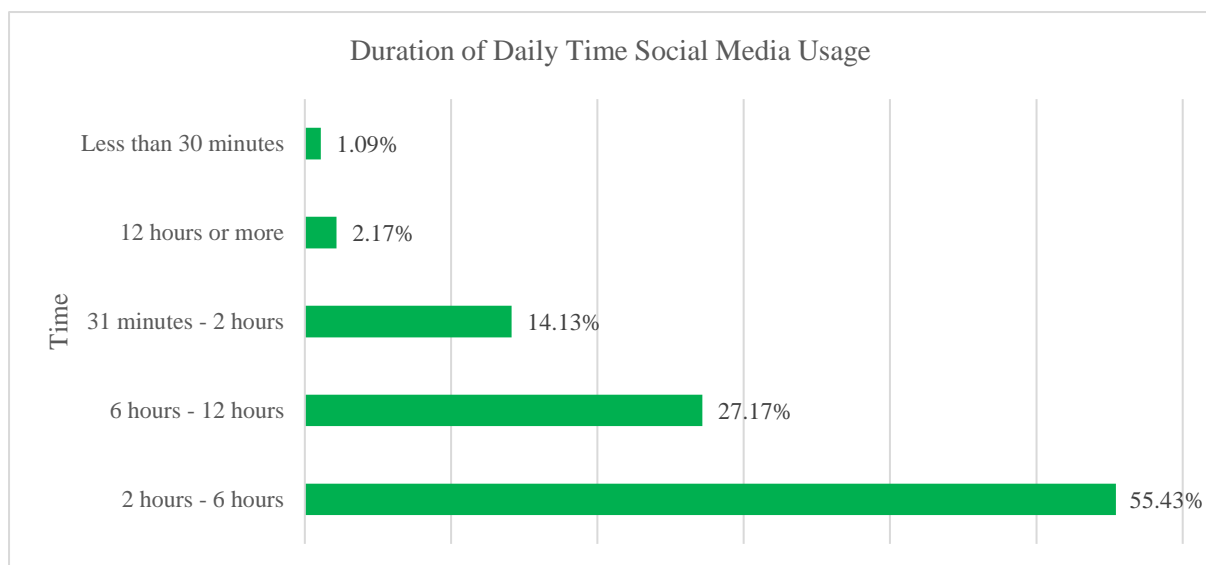


FIGURE 3. Duration of Daily Time Social Media Usage

Figure 4 shows the number of social media accounts per student. Majority of the students ($n=68$) have 5 and more of social media accounts with 73.91%, 13 students have 4 accounts of social media with 14.13%, 9 students have 3 social media accounts with 9.78% and only 2 students have 2 social media accounts with 2.17%.

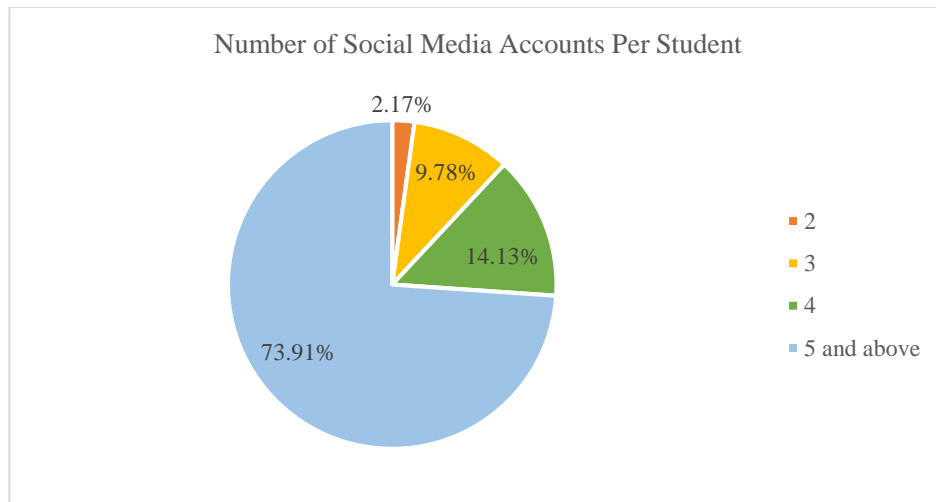


FIGURE 4. Number of Social Media Accounts

Figure 5 shows the top social media platform by usage among undergraduate students. Most of the students preferred to use Instagram as their social media platform with 23.60% (n=84), followed by WhatsApp (n=79, 22.19%), YouTube (n=56, 15.73%), TikTok (n=52, 14.61%) and Telegram (n=39, 10.96%).

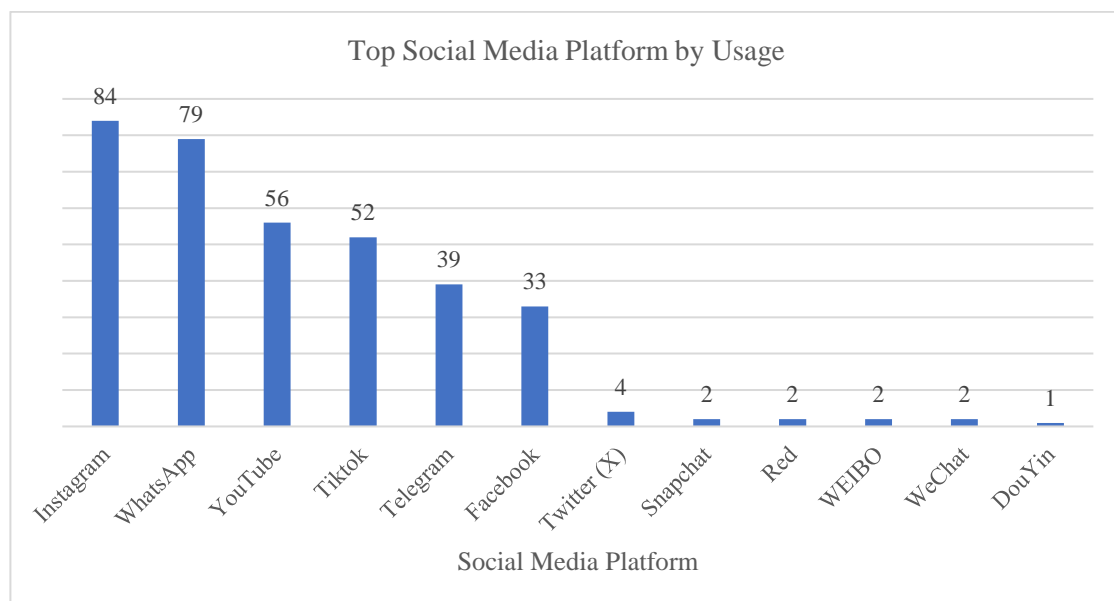


FIGURE 5. Top Social Media Platform by Usage

Figure 6 illustrates the purpose of using social media platforms among undergraduate students. Most of the students use social media platforms to stay connected with friends and family (20.99%), followed by discover and enjoy entertainment (19.75%), and stay informed about current events (17.78%). Also, the students use social media to share information and their opinions (16.05%) as well as share and consume creative content (13.83%). In addition, the students use social media as a platform to build and expand their network (11.36%) and release their stress (0.25%).

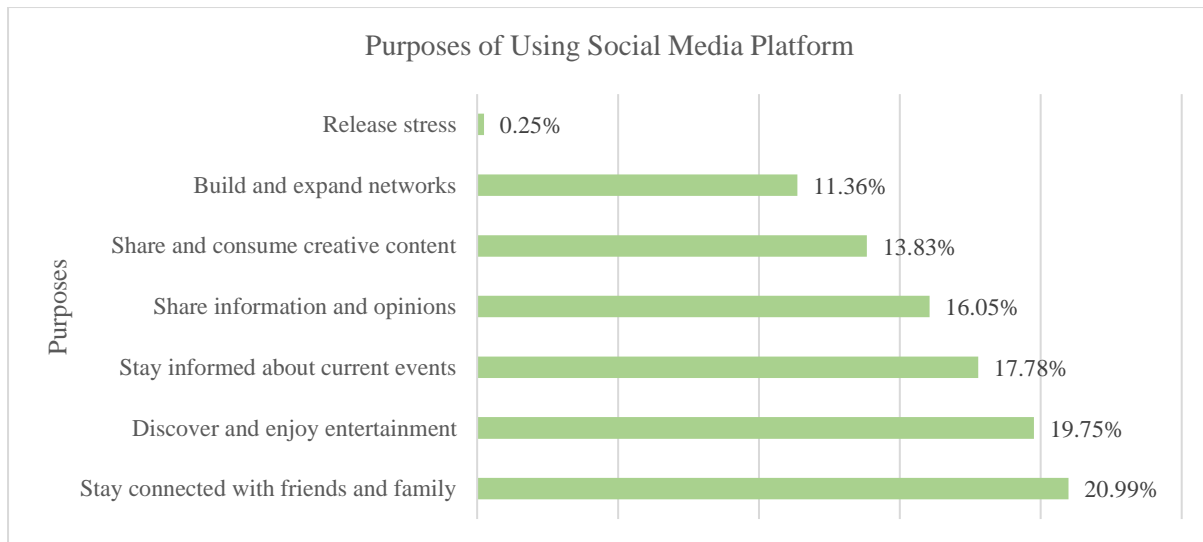


FIGURE 6. Purposes of Using Social Media Platform

As a discussion, the study found that the majority of students were female (78%), and the age distribution of students showed that the majority were young adults between the ages of 19 and 24. This finding is consistent with the representative age range of students studying at university and this age group is relevant to social media use as they are actively engaged with technology (Dalol et al., 2021). The finding shows that 55.43% of students spend between 2 and 6 hours daily on social media and suggests a potential for internet addiction among undergraduate students (Chandrasena & Ilankoon, 2022; Tayo et al., 2019). The present study showed that the majority of students use social media in a balanced way in their everyday lives. However, a significant number of students (27.17%) spend even more time, between 6 and 12 hours, indicating a high level of engagement on social media. Although the number of students is not high, it should raise concerns about possible negative effects on their academic performance and well-being. According to the literature, as the daily social media use increases, the level of social media also increases (Parlak Sert & Başkale, 2023). Although social media offers numerous benefits, excessive use can have negative consequences. This aligns with the findings from (Riehm et al., 2019), which state that young adults who spend more than three hours on social media are at high risk of mental health problems, and the study by (Bhandarkar et al., 2021) has shown that as the duration of social media use per day increases, academic performance deteriorates. Therefore, social media addiction has an impact on academic performance and mental health.

In addition, high levels of engagement on various social media platforms have shown that most students have five or more social media accounts. Students use different platforms to satisfy specific interests, such as gaming, academic discussions, fashion and entertainment (Dalol et al., 2021). Instagram is the top choice of undergraduate students. This result is in line with the study by (Huang & Su, 2018) in which Instagram is the most social media platform among young people. The motives for using Instagram were mainly viewing posts for the purpose of social interaction and making a creative post for self-expression. The preference for Instagram is due to its visually attractive user interface, strong emphasis on visual content and popularity among younger demographics. Besides that, WhatsApp, a widely used messaging app, ranks second after Instagram. Its popularity can be linked to its ease of use, and the ability to have both one-on-one and group conversations. Although TikTok is a new trend nowadays, TikTok platform is less popular among students compared to YouTube as shown in Figure 5.

Furthermore, the most common purpose of using social media among undergraduate students is to stay connected with friends and family. While this social connectivity has significant positive effects, it can also pose challenges to academic life and mental well-being. Social media platforms provide important emotional support by maintaining connections with friends and family when away from home and feeling lonely. This finding is consistent with the social nature of social media platforms, which facilitate communication and relationship building. Although social media is a great way to stay connected with friends, distraction and overuse of social media can contribute to anxiety, depression and sleep disturbances, sometimes leading to social comparison, cyberbullying and low self-esteem (Rathakrishnan et al., 2023). The second most common purpose is to discover and enjoy entertainment. This reflects the role of social media as a source of entertainment, with a wide range of content, including videos, and music (Alshuaibi et al., 2018; Sponder & Khan, 2017). Staying informed about current events is the third most important reason for using social media. Therefore, social media has become a significant source of news and information for young people, especially undergraduate students.

The findings of this study are consistent with those of the preferred social media platforms by (Huang & Su, 2018), who also found that Instagram is favored by students due to its strong emphasis on visual communication and social interaction. By understanding behavioral patterns of undergraduate students on social media such as Instagram, educators can create more engaging and effective learning experiences that match students' interests and learning styles. As Instagram focuses on visual content such as photos and videos, it is important for educators and policymakers to improve learning activities on this social media platform (Sivakumar et al., 2023). For example, educators can incorporate more visual material into lectures and assignments, such as interactive infographics and short video clips.

Furthermore, educators can create assignments and assign projects that require students to create visual presentations, short videos, or digital stories to express their understanding of concepts by encouraging student-generated visual content on online social media platforms. Encouraging visual storytelling can help students develop critical thinking, creativity, and communication skills as they present their ideas and collaborate in a more engaging and dynamic way. Additionally, the findings of this study can guide educators, parents and policymakers better understand how students' patterns on social media use can influence their own behavior, both positively and negatively. Overall, this study contributes to a better understanding of social media use in students' everyday lives and provides valuable insights for higher education institutions to consider. It suggests that social media can be a valuable tool for students to collaborate and share information during their studies, which can also enhance their learning activities and experiences.

CONCLUSION

Social media is very popular among Malaysian undergraduate students. They use social media to keep in touch with friends and family, find entertainment and catch up on the latest news. The majority of students are between the ages of 19 and 24 years old, the age group that is highly active on social media. It was found that students spend two to six hours a day on social media and have multiple social media accounts. Instagram was the most preferred social media platform among undergraduate students. It was followed by WhatsApp, YouTube, TikTok and Telegram. Educators and parents should monitor the social media use by undergraduates to prevent social media addiction related to excessive use. One significant limitation of this study

is the small sample size (n=92) drawn from a single institution. Additionally, this study relied on self-reported data collected through an online questionnaire, which may have led to recall bias and limits the generalizability of the findings to a larger group of undergraduate students in Malaysia. The study focuses on descriptive statistics and is limited to inferential statistics that do not include statistical tests such as chi-square tests and hypothesis tests. The rapid development of social media platforms may limit the long-term relevance of the findings. This is because social media platforms are constantly evolving with new features and content formats. As platforms evolve, student behavior towards social media platforms will also change, such as the increasing popularity of live streaming, and interactive features, which can have a significant impact on student engagement and well-being. A larger sample size and conducting longitudinal studies at several higher education institutions would provide and allow to track changes in social media usage patterns for more robust findings. Further research requires inferential statistical methods to test hypotheses and draw conclusions about social media use in the overall population. Future studies should also consider the changing behavioral patterns of students and the emergence of new social media platforms, as students adapt quickly to new platforms and features, and their usage patterns can change rapidly in response to these evolving trends. This dynamic nature of social media use requires ongoing research to keep pace with these changes and ensure that findings remain relevant and informative. Future research should investigate the impact of new social media platforms such as TikTok on student well-being and academic performance.

This study provides valuable insights into behavioral patterns on social media use of undergraduate students and highlights the significant role of social media in their daily lives. By leveraging the insights gained from understanding students' social media use, educators can create a more dynamic and effective learning environment that empowers students to succeed in an increasingly digital world, particularly with Instagram. Educators can use social media platforms to facilitate group projects, online discussions and peer feedback to encourage collaboration and communication among undergraduate students. Developing and integrating the use of social media to express student creativity, such as creating short videos, designing presentations, and developing online portfolios, is important for educational strategies. The current outcomes can bridge the gap between theory and practice by connecting learning activities to real-world applications by incorporating social media into projects that address real-world problems and challenges, including the creation of social media campaigns that address local community needs and raise awareness about improving a sustainable environment through social media platforms.

ACKNOWLEDGEMENT

The authors would like to thank all parties that support and involve directly or indirectly into this research, especially Universiti Sains Malaysia, Pulau Pinang.

REFERENCES

- Al-Rahmi, Ali Mugahed, Alina Shamsuddin, Eta Wahab, Waleed Mugahed Al-Rahmi, Omar A. Alismaiel, and Joseph Crawford. 2022. "Social Media Usage and Acceptance in Higher Education: A Structural Equation Model." *Frontiers in Education* 7 (August):964456. <https://doi.org/10.3389/feduc.2022.964456>.
- Alshuaibi, Mohammad Said Ibrahim, Ahmad Said Ibrahim Alshuaibi, Faridahwati Mohd. Shamsudin, and Darwina Ahmad Arshad. 2018. "Use of Social Media, Student Engagement, and Academic Performance of Business Students in Malaysia."

- International Journal of Educational Management* 32 (4): 625–40. <https://doi.org/10.1108/IJEM-08-2016-0182>.
- Bhandarkar, Ajay M., Arvind Kumar Pandey, Ramya Nayak, Kailesh Pujary, and Ashwini Kumar. 2021. “Impact of Social Media on the Academic Performance of Undergraduate Medical Students.” *Medical Journal Armed Forces India* 77 (February): S37–41. <https://doi.org/10.1016/j.mjafi.2020.10.021>.
- Chandrasena, P. P. C. M., and I. M. P. S. Ilankoon. 2022. “The Impact of Social Media on Academic Performance and Interpersonal Relations among Health Sciences Undergraduates.” *Journal of Education and Health Promotion* 11 (1): 117. https://doi.org/10.4103/jehp.jehp_603_21.
- Dalol, Ahmed Azmi, Rafikul Islam, and Kabir Sardar Md. Humayun. 2021. “Social Media Usage and Behaviour among Generation Y and Z in Malaysia.” *Middle East J. of Management* 8 (5): 405. <https://doi.org/10.1504/MEJM.2021.117506>.
- Dumford, Amber D., Angie L. Miller, C.H. Kevin Lee, and Adam Caskie. 2023. “Social Media Usage in Relation to Their Peers: Comparing Male and Female College Students’ Perceptions.” *Computers and Education Open* 4 (December):100121. <https://doi.org/10.1016/j.caeo.2022.100121>.
- Fazil, Abdul Wajid, Musawer Hakimi, Khatera Akrami, Mursal Akrami, and Fazila Akrami. 2024. “Exploring the Role of Social Media in Bridging Gaps and Facilitating Global Communication.” *Studies in Media, Journalism and Communications* 2 (1): 13–21. <https://doi.org/10.32996/smjc.2024.2.1.2>.
- Fox, April Ursula. 2022. *Social Media Analytics Strategy: Using Data to Optimize Business Performance*. Berkeley, CA: Apress. <https://doi.org/10.1007/978-1-4842-8306-6>.
- Huang, Yi-Ting, and Sheng-Fang Su. 2018. “Motives for Instagram Use and Topics of Interest among Young Adults.” *Future Internet* 10 (8): 77. <https://doi.org/10.3390/fi10080077>.
- Kamisan, Muhammad Husairi, and Mohd Syuhaidi Abu Bakar. 2021. “The Usage Patterns of Social Media among University Students in Malaysia During the Movement Control Order (MCO).” *International Journal of Academic Research in Business and Social Sciences* 11 (9): Pages 35-48. <https://doi.org/10.6007/IJARBS/v11-i9/10971>.
- Khan, Gohar F. 2015. *Seven Layers of Social Media Analytics: Mining Business Insights from Social Media; Text, Actions, Networks, Hyperlinks, Apps, Search Engine, and Location Data*. CreateSpace Independent Publishing Platform.
- Mohd Sobhi, Ishak, Ismail Awan, Mat Bakri, Kassim Azahar, Mamat Shariffah, and Talib Norati’qah. 2016. “Belia Dan Penggunaan Media Sosial.” Institut Penyelidikan Pembangunan Belia Malaysia, *Malaysian Journal of Youth Studies*, 149–65.
- Mohd Zawawi, Nurul Shakirah, and Hairulliza Mohamad Judi. 2020. “Model of Meaningful Learning Using Social Media in Higher Education Institution.” *Asia-Pacific Journal of Information Technology & Multimedia* 09 (02): 1–25. <https://doi.org/10.17576/apjitm-2020-0902-06>.
- Norsiah, Abdul Hamid, Ishak Mohd Sobhi, Ismail Syamsul Anuar, and Mohmad Yazam Siti Syamsul Nurin. 2013. “Social Media Usage among University Students in Malaysia.” *Social Media and the New Academic Environment: Pedagogical Challenges*, 245–55. <https://doi.org/10.4018/978-1-4666-2851-9.ch012>.
- Parlak Sert, Hilal, and Hatice Başkale. 2023. “Students’ Increased Time Spent on Social Media, and Their Level of Coronavirus Anxiety during the Pandemic, Predict Increased Social Media Addiction.” *Health Information & Libraries Journal* 40 (3): 262–74. <https://doi.org/10.1111/hir.12448>.
- Rathakrishnan, Balan, Soon Singh Bikar Singh, Azizi Yahaya, Mohammad Rahim Kamaluddin, Noor Hassline Mohamed, Anath Rau Krishnan, and Zaizul Ab Rahman. 2023. “The Influence of Social Media Use on Social Connectedness Among University

- Students.” In *International Conference on Information Systems and Intelligent Applications*, edited by Mostafa Al-Emran, Mohammed A. Al-Sharafi, and Khaled Shaalan, 550:465–76. *Lecture Notes in Networks and Systems*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-16865-9_37.
- Riehm, Kira E., Kenneth A. Feder, Kayla N. Tormohlen, Rosa M. Crum, Andrea S. Young, Kerry M. Green, Lauren R. Pacek, Lareina N. La Flair, and Ramin Mojtabai. 2019. “Associations Between Time Spent Using Social Media and Internalizing and Externalizing Problems Among US Youth.” *JAMA Psychiatry* 76 (12): 1266. <https://doi.org/10.1001/jamapsychiatry.2019.2325>.
- Sheng, Chen Yeong, Nureen Hawanie Noresafendy, Wong Loke Yee, Muadz Hazhar, and Faieza Samat. 2022. “Social Media Influence to the Life of Malaysian Pre-University Students.” *Malaysian Journal of Social Sciences and Humanities (MJSSH)* 7 (8): e001654. <https://doi.org/10.47405/mjssh.v7i8.1654>.
- Sivakumar, Arunkumar, Sudarsan Jayasingh, and Shahenaz Shaik. 2023. “Social Media Influence on Students’ Knowledge Sharing and Learning: An Empirical Study.” *Education Sciences* 13 (7): 745. <https://doi.org/10.3390/educsci13070745>.
- Sponder, Marshall, and Gohar F. Khan. 2017. *Digital Analytics for Marketing*. 1 Edition. New York: Routledge.
- Sümer, Selay Ilgaz, and Nurettin Parilti. 2023. *Social Media Analytics in Predicting Consumer Behavior*. Boca Raton, FL: CRC Press.
- Taherdoost, Hamed. 2016. “Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research.” *International Journal of Academic Research in Management* 5 (2): 18–27. <https://doi.org/hal-02546796>.
- Tarifa-Rodriguez, Aida, Javier Virues-Ortega, Agustin Perez-Bustamante Pereira, Ana Calero-Elvira, and Sarah Cowie. 2024. “Quantitative Indices of Student Social Media Engagement in Tertiary Education: A Systematic Review and a Taxonomy.” *Journal of Behavioral Education* 33 (4): 769–97. <https://doi.org/10.1007/s10864-023-09516-6>.
- Tayo, Subair S., Solomon T. Adebola, and Deborah O. Yahya. 2019. “Social Media: Usage and Influence on Undergraduate Studies in Nigerian Universities.” *International Journal of Education and Development using Information and Communication Technology* 15 (3): 53–62. <https://eric.ed.gov/?id=EJ1227664>
- Wan Roslina, Wan Othman, Mohd Apandi Ziti Fariha, and Ngah Nurul Haslinda. 2017. “Impact of Social Media Usage on Students Academic Performance in Terengganu, Malaysia.” *Journal of Applied Environmental and Biological Sciences* 7 (5): 140–44.